

SANYO

SANYO SCROLL COMPRESSORS

Code : 809 966 88

Model : C-SBN453H8G



DALIAN SANYO COMPRESSOR CO.,LTD.

Rev.2007-5

SANYO Scroll Compressor



Model C-SBN453H8G

Refrigerant R407C

Electrical 380-415 Volts 3 Phase 50Hz

440-460 Volts 3 Phase 60Hz

Nominal Performance at ARI

Power Source	<u>50Hz-380V</u>	<u>60Hz-440V</u>
Capacity (W)	<u>17600</u>	<u>21300</u>
Power (W)	<u>5800</u>	<u>7000</u>
Current (A)	<u>9.93</u>	<u>10.2</u>
COP (W/W)	<u>3.03</u>	<u>3.04</u>
Mass Flow (kg/h)	<u>424</u>	<u>513</u>

Rating Conditions (MID Point)

Condensing Temperature(°C)	<u>54.4</u>
Evaporating Temperature(°C)	<u>7.2</u>
Return Gas temperature(°C)	<u>18.3</u>
Liquid Temperature(°C)	<u>43.8</u>
Ambient Temperature(°C)	<u>35</u>

Motor

	50Hz	60Hz
Voltage Range(V)	<u>342-456</u>	<u>396-506</u>
RLA (A)	<u>10.4</u>	
MCC (A)	<u>14.5</u>	
LRA (A)	<u>66</u>	<u>72</u>
RPM (min ⁻¹)	<u>2900</u>	<u>3450</u>

Compressor

Maximum Discharge Temp(°C)	<u>130</u>
Displacement (cm ³ /rev)	<u>100</u>
Weight (with oil kg)	<u>39.5</u>
VDE File Number	<u>40010537</u>

Oil

Oil Type	<u>FV68S</u>
Initial Charge (ml)	<u>1700</u>
Re-charge (ml)	<u>1600</u>

Electrical Components

Motor Protector Type	<u>Internal</u>
Run Capacitor Rating (MFD/Volts)	<u>n/a</u>

Nominal performance values +/-5% with 1 hr run-in.

Ratings with air over compressor.

Specifications subject to change without notice.



Made by: Dalian **SANYO** Compressor Co., Ltd.

PERFORMANCE DATA

Compressor Model(Code)	C-SBN453H8G (809 966 88)
Power Source	3PH 50Hz 380-415V
Suction Gas Superheat(K)	9
Sub Cooling(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R407C

**CAPACITY(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	10,120	12,260	13,920	18,000	21,300	23,720	26,410	28,510
40.5	9,170	11,140	12,680	16,470	19,560	21,820	24,340	26,320
45.0	8,440	10,290	11,730	15,310	18,220	20,360	22,750	24,630
50.0	7,700	9,420	10,760	14,100	16,830	18,850	21,100	22,870
54.4		8,710	9,970	13,110	15,700	17,600	19,730	21,420
60.0			9,050	11,960	14,360	16,140	18,130	19,710
65.0				11,030	13,280	14,950	16,830	18,320

POWER(W)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	3,580	3,610	3,620	3,650	3,670	3,680	3,690	3,690
40.5	4,070	4,090	4,110	4,140	4,150	4,160	4,170	4,170
45.0	4,530	4,560	4,580	4,610	4,620	4,630	4,630	4,640
50.0	5,130	5,160	5,180	5,200	5,210	5,220	5,220	5,220
54.4		5,750	5,770	5,790	5,800	5,800	5,800	5,800
60.0			6,600	6,630	6,630	6,630	6,620	6,610
65.0				7,450	7,450	7,440	7,430	7,420

CURRENT(A)

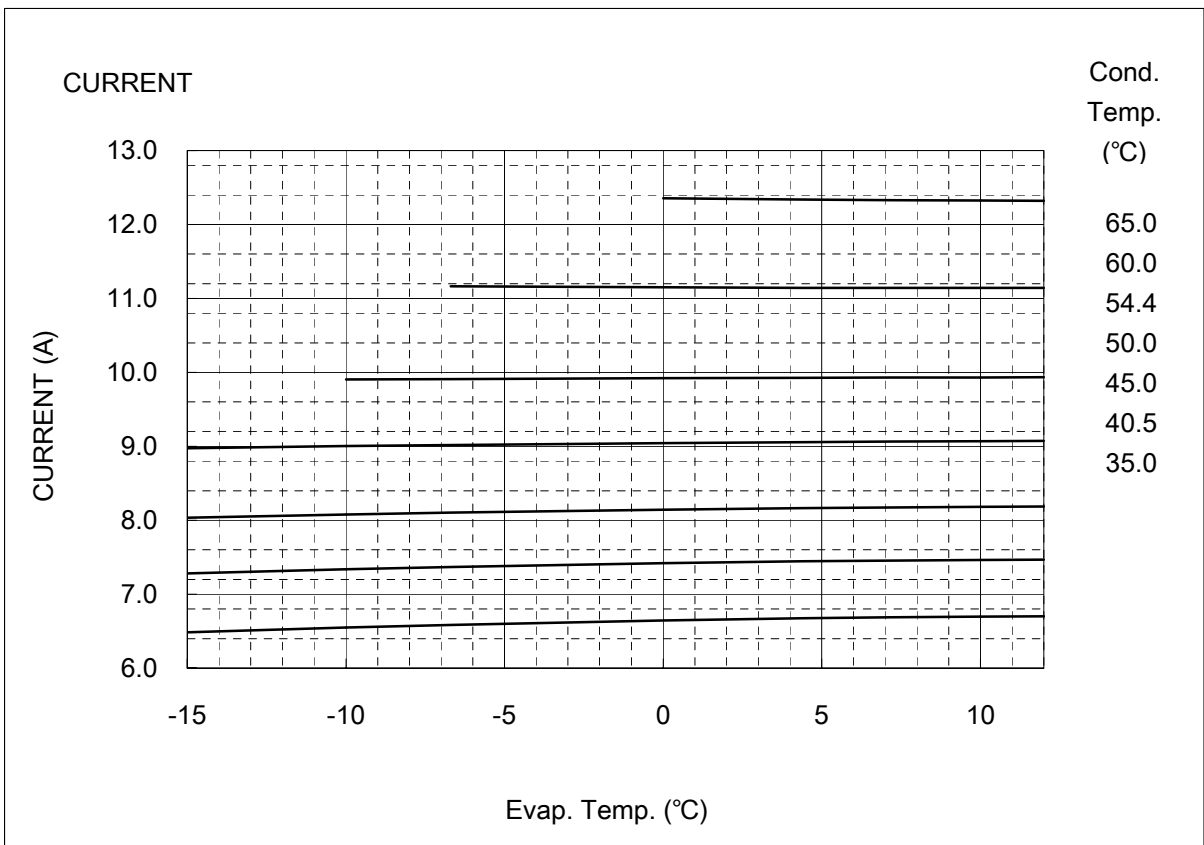
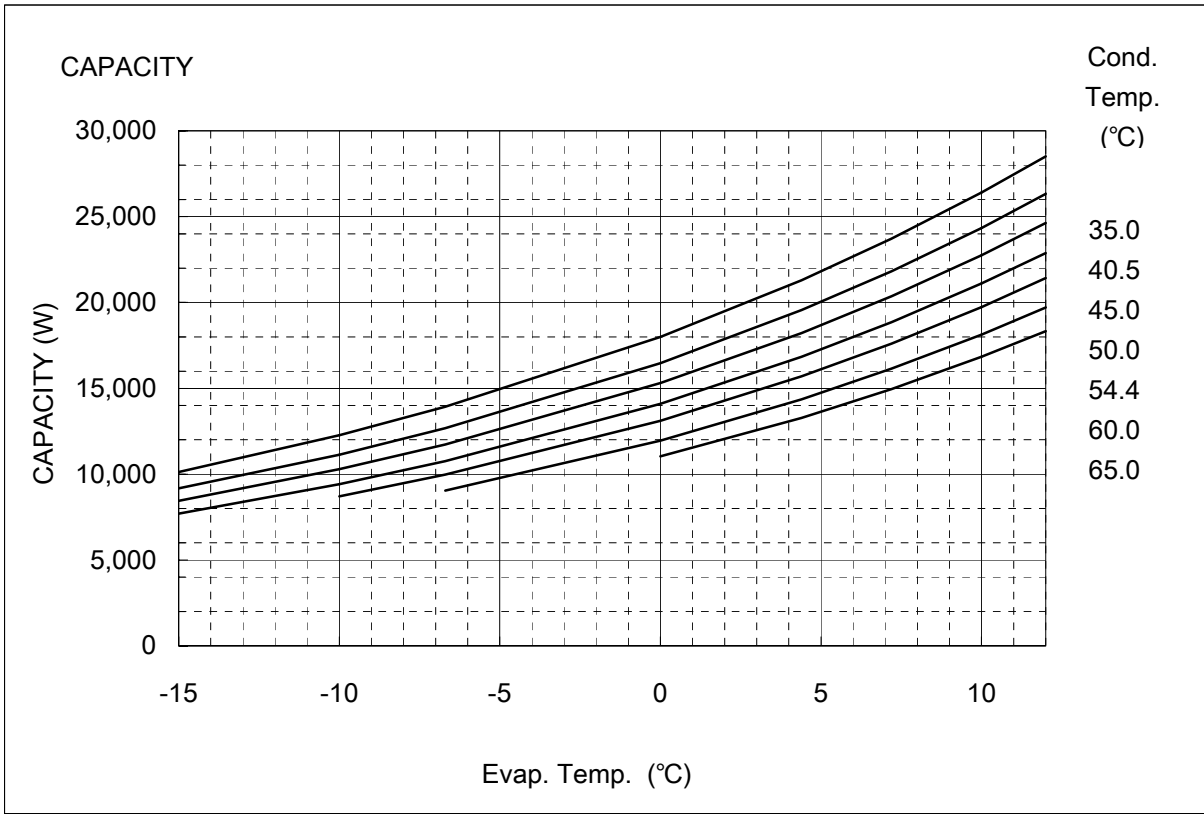
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	6.5	6.5	6.6	6.6	6.7	6.7	6.7	6.7
40.5	7.3	7.3	7.4	7.4	7.4	7.5	7.5	7.5
45.0	8.0	8.1	8.1	8.1	8.2	8.2	8.2	8.2
50.0	9.0	9.0	9.0	9.0	9.1	9.1	9.1	9.1
54.4		9.9	9.9	9.9	9.9	9.9	9.9	9.9
60.0			11.2	11.1	11.1	11.1	11.1	11.1
65.0				12.4	12.3	12.3	12.3	12.3

NOTE:

- * The performance values subject to change without notice.
- * The performance values are based on MID point method.

Compressor Model(Code)
Power Source

C-SBN453H8G (809 966 88)
3PH 50Hz 380-415V



COEFFICIENTS OF PERFORMANCE CURVES



Compressor Model	C-SBN453H8G (809 966 88)
Power Source	3PH 50Hz 380-415V
Suction Gas Superheat (K)	9
Sub Cooling (K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R407C

$$X=C1+C2*(S)+C3*D+C4*(S2)+C5*(S*D)+C6*(D2)+C7*(S3)+C8*(D*S2)+C9*(S*D2) +C10*(D3)$$

X—CAPACITY(W) OR POWER(W) OR CURRENT(A) OR FLOW(kg/h)

S—EVAPORATING TEMP, °C

D—CONDENSING TEMP, °C

380V-50Hz	CAPACITY (W)	POWER (W)	CURRENT (A)
C1	3.034880E+04	2.721748E+03	4.617993E+00
C2	1.060532E+03	-6.974613E-02	1.557206E-03
C3	-4.182717E+02	-2.743618E+01	-1.328039E-02
C4	1.754255E+01	2.007315E-01	-6.459148E-04
C5	-1.211605E+01	2.468342E-01	4.574345E-04
C6	1.861968E+00	1.541522E+00	2.035840E-03
C7	1.539044E-01	-8.299031E-04	9.746187E-07
C8	-1.161028E-01	-6.813749E-03	1.149685E-05
C9	4.543848E-02	-3.655849E-03	-8.462249E-06
C10	4.773682E-09	-1.035467E-08	-6.685040E-12

Note:The polynomial coefficients subject to change without notice.

PERFORMANCE DATA

Compressor Model(Code)	C-SBN453H8G (809 966 88)
Power Source	3PH 60Hz 440-460V
Suction Gas Superheat(K)	9
Sub Cooling(K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R407C

**CAPACITY(W)**

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	12,180	14,730	16,690	21,530	25,450	28,300	31,480	33,960
40.5	11,140	13,500	15,330	19,820	23,470	26,140	29,100	31,430
45.0	10,360	12,570	14,280	18,510	21,950	24,470	27,270	29,470
50.0	9,540	11,600	13,200	17,150	20,370	22,730	25,360	27,420
54.4		10,810	12,310	16,040	19,070	21,300	23,790	25,740
60.0			11,270	14,720	17,540	19,610	21,930	23,750
65.0				13,650	16,300	18,240	20,410	22,120

POWER(W)

Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	4,440	4,470	4,490	4,540	4,580	4,610	4,640	4,670
40.5	4,970	5,010	5,040	5,100	5,140	5,170	5,200	5,220
45.0	5,470	5,520	5,560	5,630	5,670	5,700	5,730	5,740
50.0	6,090	6,160	6,210	6,290	6,330	6,360	6,380	6,390
54.4		6,790	6,840	6,930	6,980	7,000	7,020	7,030
60.0			7,740	7,840	7,890	7,900	7,920	7,920
65.0				8,740	8,780	8,790	8,800	8,790

CURRENT(A)

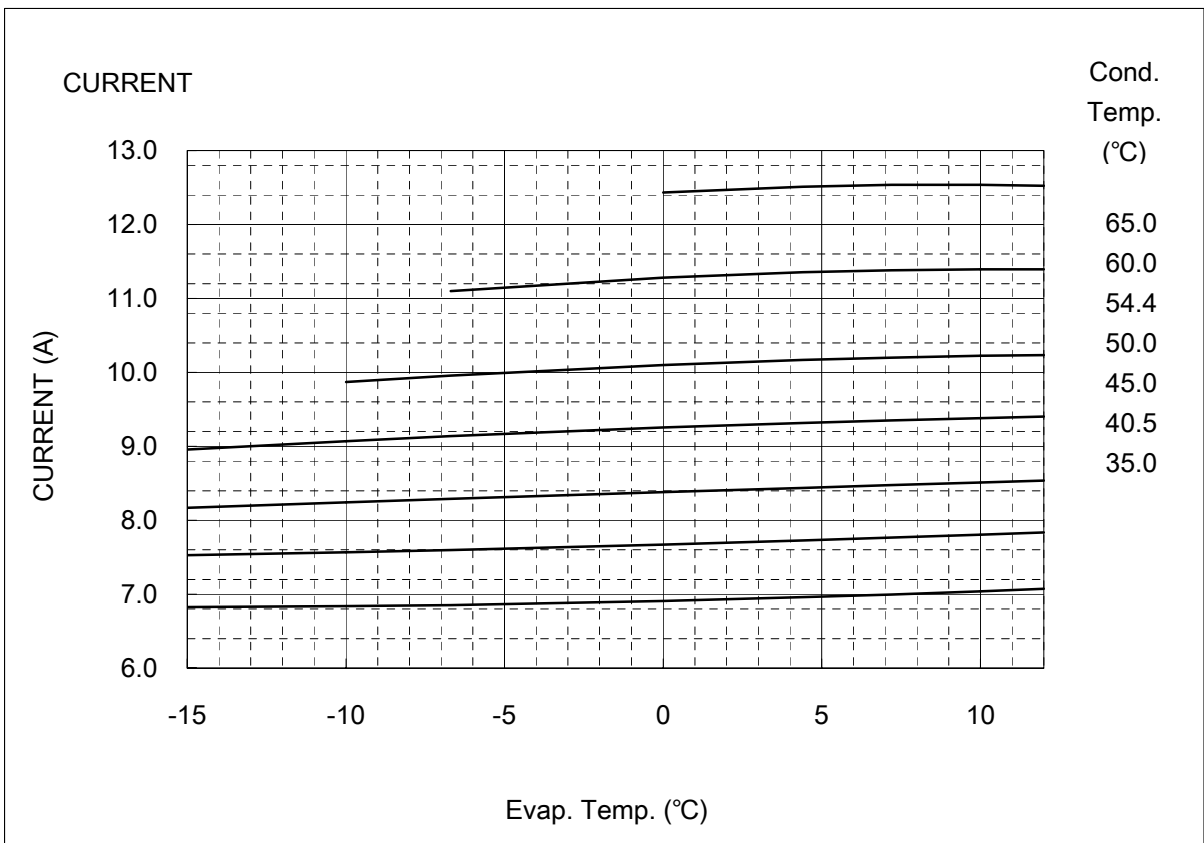
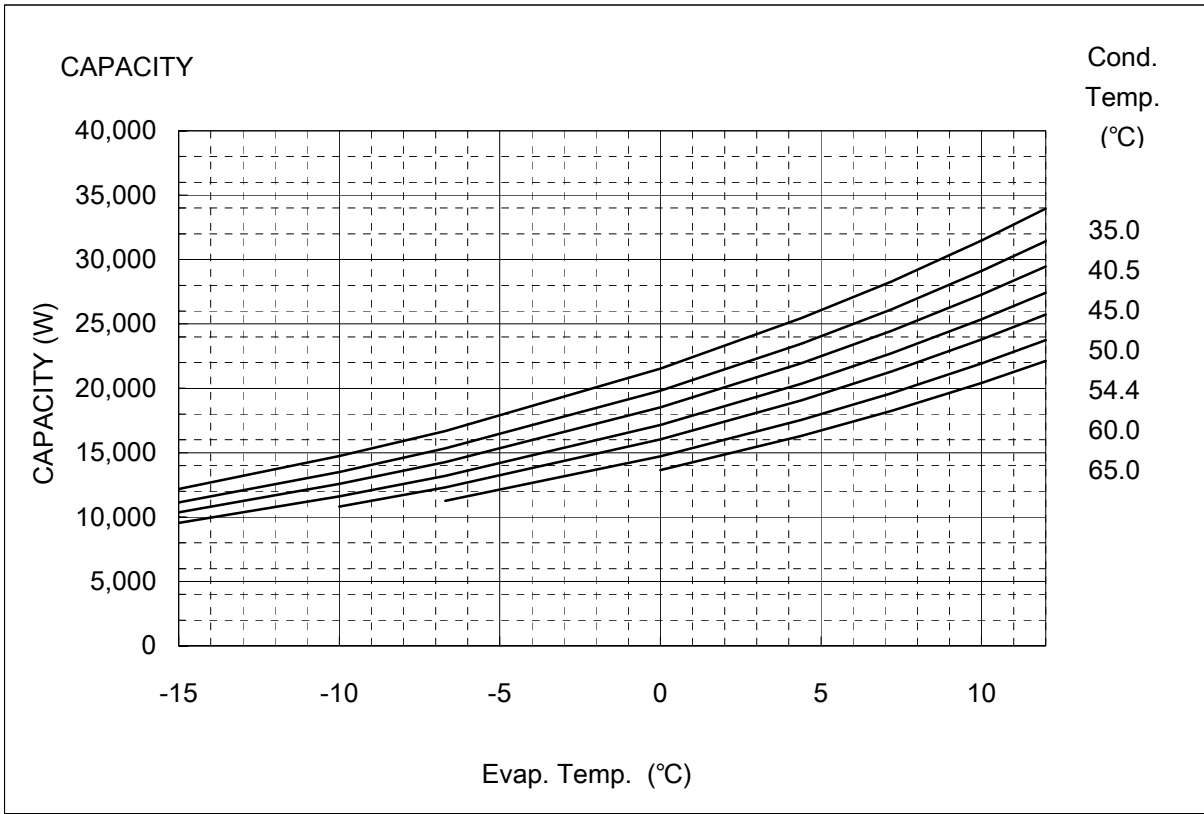
Condensing Temperature(°C)	Evaporating Temperature(°C)							
	-15	-10	-6.7	0	4.4	7.2	10	12
35.0	6.8	6.8	6.9	6.9	7.0	7.0	7.0	7.1
40.5	7.5	7.6	7.6	7.7	7.7	7.8	7.8	7.8
45.0	8.2	8.2	8.3	8.4	8.4	8.5	8.5	8.5
50.0	9.0	9.1	9.1	9.3	9.3	9.4	9.4	9.4
54.4		9.9	10.0	10.1	10.2	10.2	10.2	10.2
60.0			11.1	11.3	11.4	11.4	11.4	11.4
65.0				12.4	12.5	12.5	12.5	12.5

NOTE:

- * The performance values subject to change without notice.
- * The performance values are based on MID point method.

Compressor Model(Code)
Power Source

C-SBN453H8G (809 966 88)
3PH 60Hz 440-460V



COEFFICIENTS OF PERFORMANCE CURVES



Compressor Model	C-SBN453H8G (809 966 88)
Power Source	3PH 60Hz 440-460V
Suction Gas Superheat (K)	9
Sub Cooling (K)	8.3
Compressor Cooling	Natural Cooling
Refrigerant	R407C

$$X=C1+C2*(S)+C3*D+C4*(S2)+C5*(S*D)+C6*(D2)+C7*(S3)+C8*(D*S2)+C9*(S*D2) +C10*(D3)$$

X—CAPACITY(W) OR POWER(W) OR CURRENT(A) OR FLOW(kg/h)

S—EVAPORATING TEMP, °C

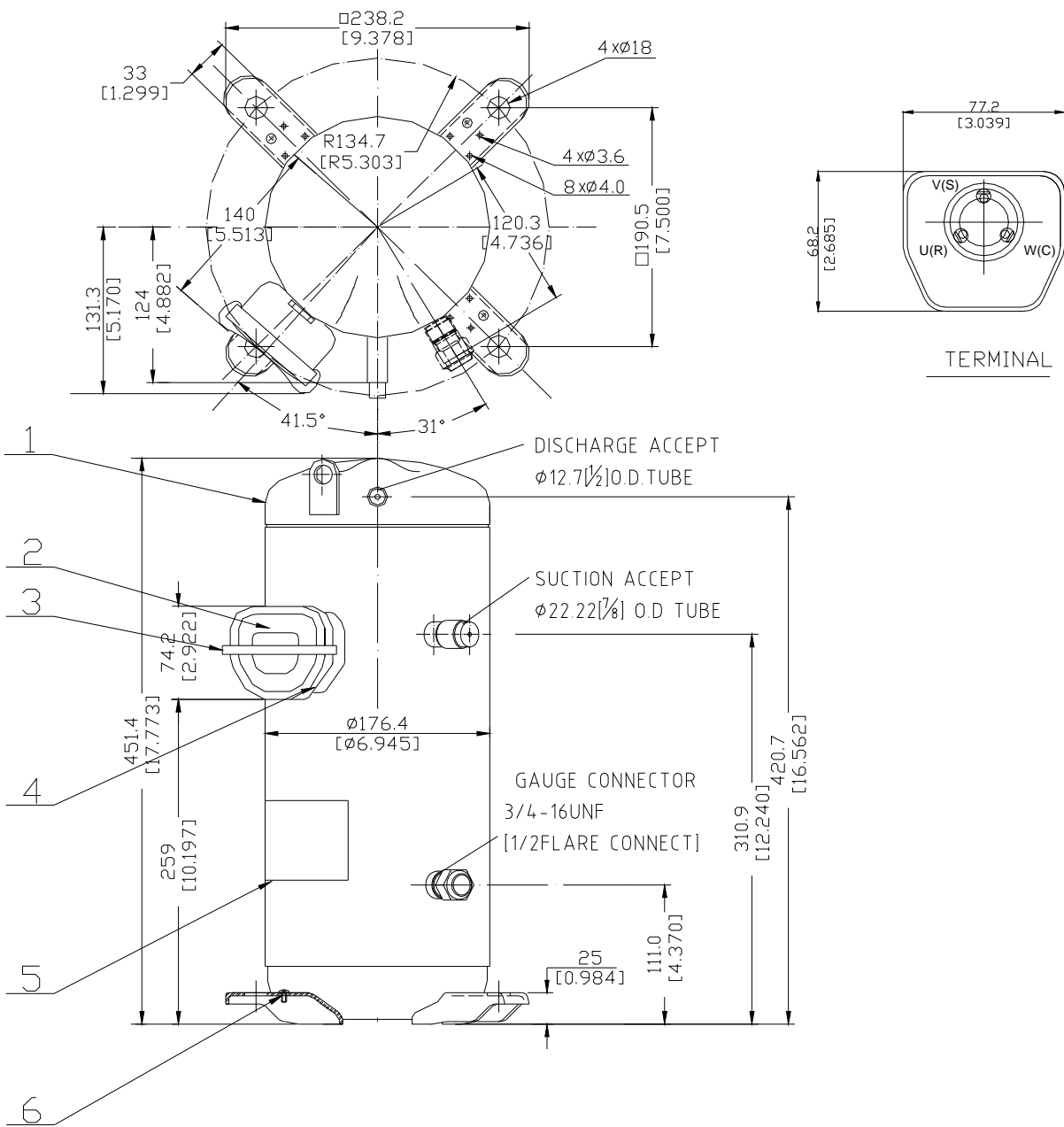
D—CONDENSING TEMP, °C

440V-60Hz	CAPACITY (W)	POWER (W)	CURRENT (A)
C1	3.520817E+04	3.139357E+03	4.559524E+00
C2	1.278941E+03	1.164898E+00	2.895240E-03
C3	-4.603243E+02	-1.381666E+01	3.860002E-03
C4	2.137054E+01	1.026872E+00	2.070168E-03
C5	-1.524220E+01	2.799734E-01	1.296189E-04
C6	1.980586E+00	1.536515E+00	1.802690E-03
C7	1.744962E-01	-1.417288E-03	-3.013645E-06
C8	-1.587598E-01	-2.430703E-02	-4.829039E-05
C9	6.140772E-02	-1.690591E-03	2.582662E-06
C10	2.272498E-09	6.056751E-09	1.069223E-11

Note:The polynomial coefficients subject to change without notice.

DIMENSIONAL SKETCH

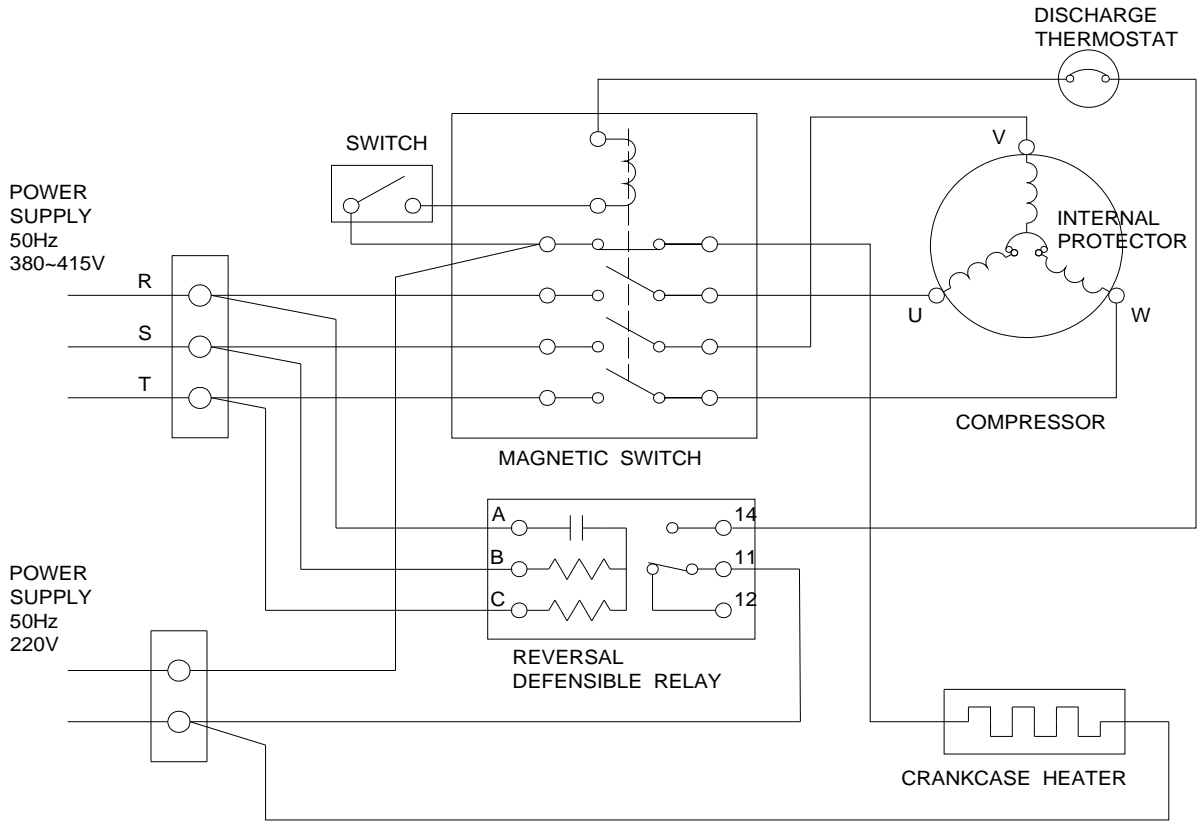
C-SB Series



No.	Qty	Name
1	1	Compressor
2	1	Terminal Box Cover
3	1	Terminal Box Clip
4	1	Insulating Grommet
5	1	Nameplate
6	1	Screw Special

WIRING & MOUNTING SKETCH

WIRING DIAGRAM C-SB Series 3phase B8



MOUNTING SKETCH

